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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,546	08/09/2001	Toshiaki Takase	Q65791	1990

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EXAMINER

GUARRIELLO, JOHN J

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 01/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/924,546	TAKASE ET AL.	
	Examiner	Art Unit	
	John J. Guarriello	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/23/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3 and 5-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 5-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

15. The Examiner acknowledges the amendment and declaration of 9/23/2003.

16. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

17. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

18. Claims 1, 3, 5-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, it is not clear what encompasses the claimed "non-woven fabric" since the claims merely set forth physical characteristics

desired in this battery separator, and do not set forth specific compositions of the non-woven fabric which would meet such claimed characteristics. It is the Examiner's position that the claims are vague, indefinite and functional since they cover any conceivable combination of characteristics either presently existing or which might be discovered in the future which would impart the claimed desired characteristic of the claimed invention of a battery separator, see Ex parte SLOB, 157 USPQ 172 (BdPatApp&Int 1968).

Applicant's arguments regarding the rejection have been considered but it is the Examiner's position that the nonwoven fabric is still indefinite since the claims recite only desired physical properties of the nonwoven, rather than setting forth the structural and/or chemical characteristics of the nonwoven.

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said

subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. Claims 1, 3, 5-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aikawa et al. 6,284,680 in view of Ohta et al. 6,605,348.

Aikawa describes a non-woven fabric made from fibers which are not substantially fibrillated and have a diameter of less than 20 microns wherein fusing a fiber web comprising fine fibers (corresponding to the ultrathin fibers of the claimed invention) with diameter of 4.0 microns or less with adhesive fibers having a diameter from 8.0 microns to less than 20.0 microns, (see abstract; column 2, lines 35-42). Aikawa describes the pore size, (column 3, lines 39-63; column 7, lines 23-34). Aikawa describes the fibers can be a polyolefin, (polyethylene, column 11, lines 1-6, or an olefin copolymer) in particular polypropylene, (column 4, lines 27-35). Aikawa describes the fiber can be islands-in-sea type, (column 4, lines 55-58; column 5, lines 65-67; column 10, lines 20-30). Aikawa describes this non-woven fabric can be used for a battery separator, (column 10, lines 6-11; column 14, lines 57-63; column 23, lines 1-4). Aikawa

differs from the claimed invention because it is silent about the limitations of claims 7-9, and 12-14, high modulus.

Ohta describes high strength polyethylene fibers with a strength (corresponding to the high modulus of the claimed invention), of 22 cN/dtex or higher which overlaps that of the claimed invention, (see abstract; column 3, lines 58-60). Ohta describes these fibers hardly causing fibrillation, (column 6, lines 10-18). Ohta describes these fibers for non-woven fabrics can be used in battery separators, (column 8, lines 60-66; column 9, lines 5-9).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the limitations of the claims of 7-9 and 12-14 because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art, *In re Boesch*, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980) especially since the art of record exemplifies the fiber and size of the fiber.

Applicant's argument regarding the previous rejection of record were considered but with the new grounds of rejection are not germane.

Double Patenting

21. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the

conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

22. Claims 1-16 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 of U.S. Patent No. 6,284,680 in view of Ohta et al. 6,605,348.

Although the conflicting claims are not identical, they are not patentably distinct from each other because these are obvious variants of the claimed invention especially since the only apparent difference is the preamble "battery separator". Regarding the modulus, Ohta describes the strength a 22 cN/dtex or higher and it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the modulus values in '680 motivated with the expectation that the material would exhibit high strength.

Applicant's arguments regarding the rejection of record were considered but they are not considered germane with the new grounds of rejection.

23. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Guarriello whose telephone number is 703-308-3209. The examiner can normally be reached on Monday to Friday from 8 am to 4 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris, can be reached on (703) 308-2414. The fax phone number for the organization where this application or proceeding is assigned is 703-305-5408.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



John J. Guarriello:gj

Patent Examiner

December 11, 2003

